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Fig. 1A

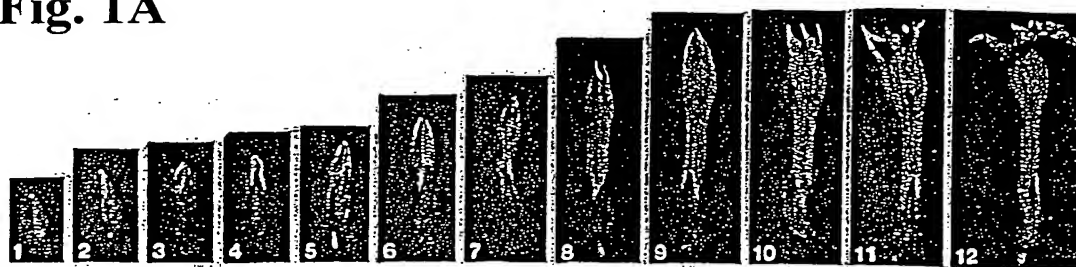


Fig. 1B

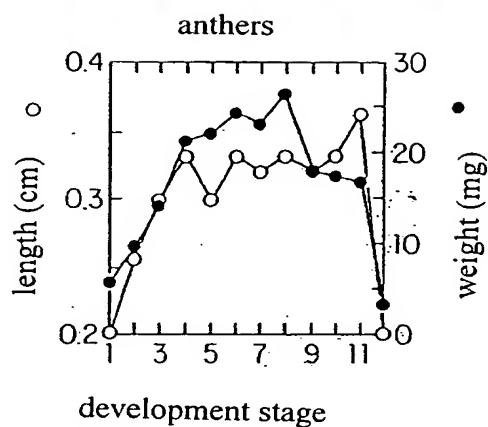
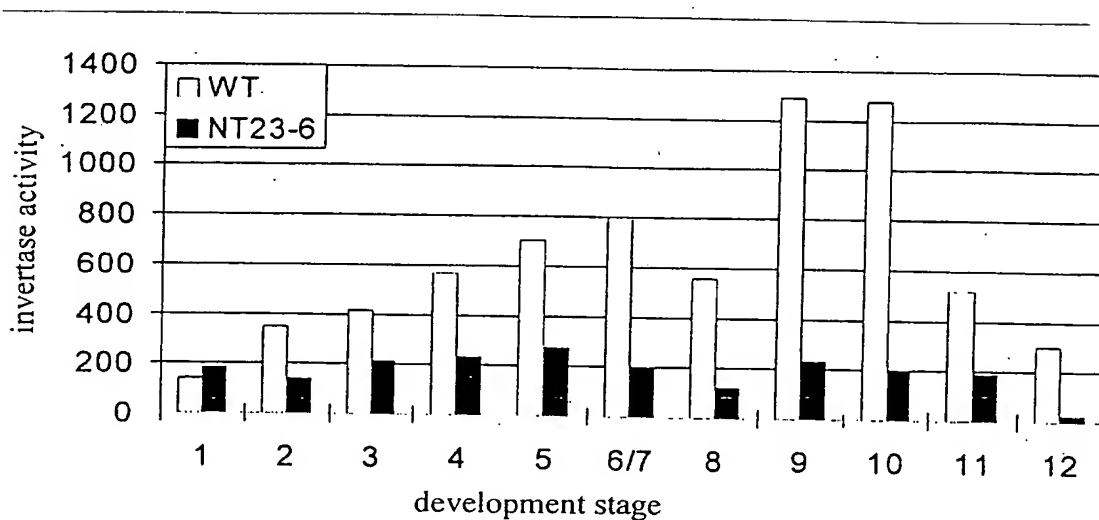


Fig. 1C

Invertase activity in tobacco pollen



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The extracellular invertase NIN88 of tobacco pollen is specifically expressed in  
the anthers

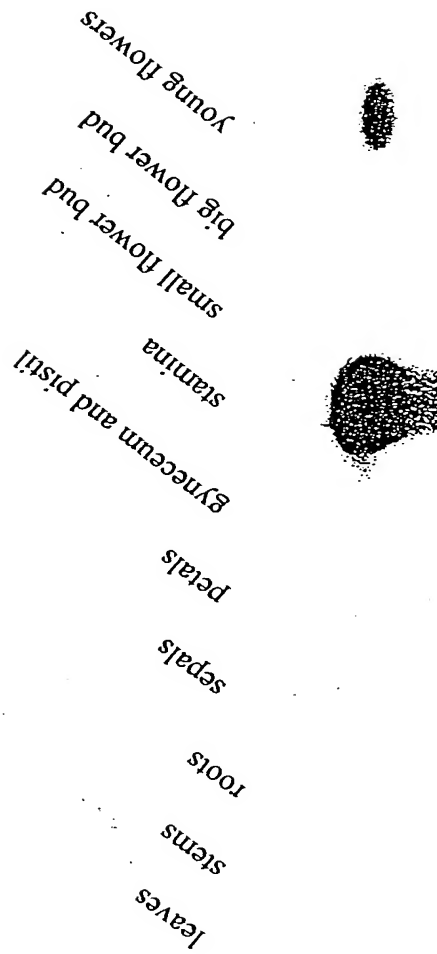


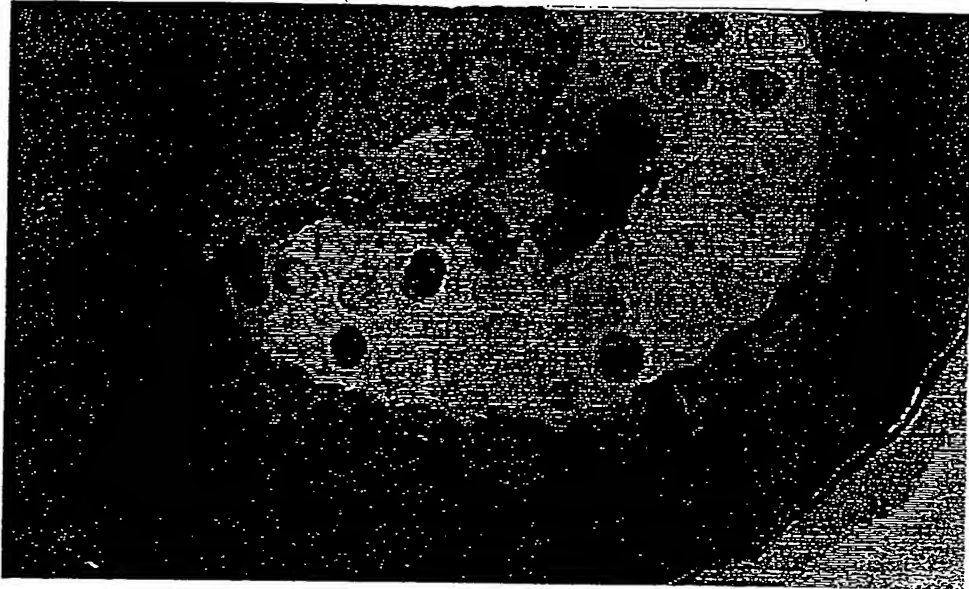
Fig. 2

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Fig. 3A

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**Fig. 3B**



**Fig. 3C**

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**Fig. 4**

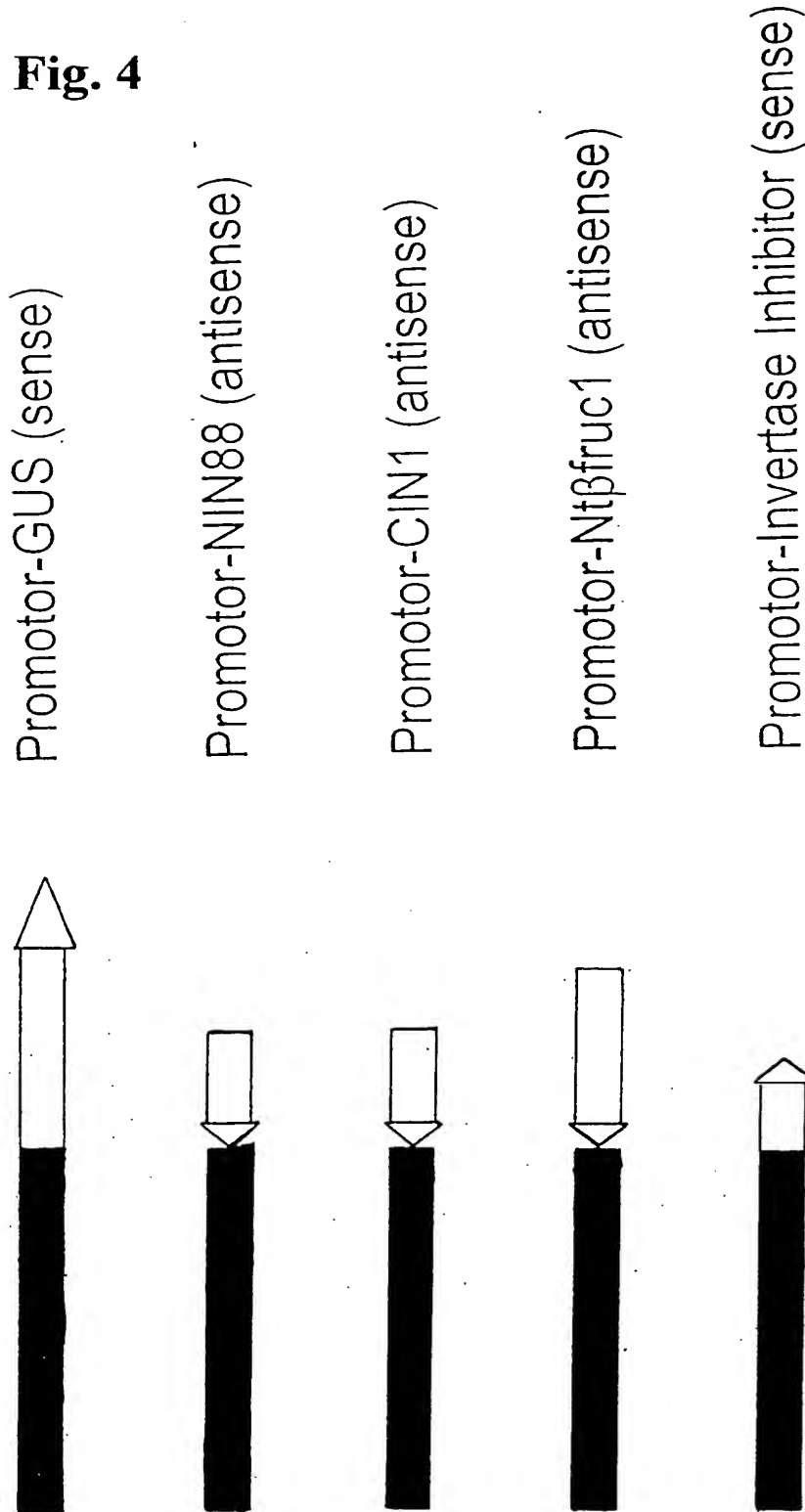


Fig. 5A

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Promoter DNA sequence of the extracellular invertase NIN88 from tobacco

1	TCTAGAATGA	CGCCACCGGC	CAGGACGGGG	AGTATGATTT	CCCCGAATGT
51	TCGTTCAACT	GCATTGTTAA	AACCTGTTAG	CGTGATGCAG	CCCGGTACTA
101	TCTTATCCTC	GAGTTTCATT	TGTGCAAGTA	CTCGAGGATG	GACAATTCAC
151	GGGCCACTCC	CATCGTCCAC	CATAATGCGT	CTTACATCTG	TATCTAATAT
201	TCGTAAAGTG	ATAACGAGGG	CATCATAGTG	AGGGAAAACC	AAACCGTGGT
251	TATCTGACTT	ATCGAAGATG	ATACTTTCTT	TAAGTTTCTC	GTACCGTTCA
301	TGAGTGATTA	ACTGTTTGAG	CTTGTGGGTT	GTGGCGAACT	TTACGTTGTT
351	GATCGAAACG	TCGTCTCCGC	CCCCGATGAT	AATGTGAATG	GTGCGAGTCC
401	GTAAGGGTGG	TTTCGGCGGT	CCCTGGTGTG	GTTACAGTCC	TCGAGAAAAG
451	TTGGTCCCTC	TCGGTCACA	CAACAATATT	TTGAGGTGTC	CTTGATGAAG
501	CATGTCCATG	ACTCTTGTC	TTAGGGCGAT	ACAATCCTCA	GTTTTGTGAC
551	CTCGCTCTTG	GTGGAACTCG	CAGAGGGCAT	CTGATTTTCT	AGTGCTTGGT
601	TCTGACCTCA	CTTTTGTGG	CCACTTTACT	TTTGGTCCGA	GCTTCTTCAA
651	TGCATAGACT	TTTCTGAGG	GTGACACACA	AAATTTGTGA	GCGGATAGTA
701	AAGAGGGCAT	ACTCTCTCG	TTCCGGTGAG	TCCCTGTCCCT	TGGCCTAGAT
751	GGGCCCTCTT	GTAGCGGGA	GAGGGGCATG	ATGGCACTTT	TGACATATCG
801	TTGATCCATT	CTCGGTTAG	ATCATGGAGC	TGCAAGATCT	CTCTTGGCAT
851	CATTTTGACG	TCCTTCCTG	GTTTCGGCTT	GTACCGAGGT	CAATCGATGA
901	GTTGGCCCAT	TCAGGTCGTC	TTCGTCGGCA	CGGGCCTCAG	CACAGTAGGC
951	GTTGTGTATT	CATCCCAAG	TGGTGGAGG	ATATTTTCATA	AGTTGGTTTA
1001	ACAGTTTTCT	GTTCGCCCTC	GAGCCATTCA	TGTTTCAGCCC	ATTCTGGAAA
1051	GTTGCTACAA	CATTCCCTT	TGATACATTC	GGTAAGGTCA	TCCTTACTCT
1101	GTTGAATCGA	CGAGGAAGT	CCCTCAATCC	CTCTCCGAGT	GATTGTTTGA
1151	TGGCAAATAT	TCGTTCACT	CTTGCCCTCCG	CGTTTTTAGC	CCCAACATGG
1201	GCCATTATGA	CTTGTCGGC	CATCTCTTCG	AATATTTCAA	TGGAGCGCGC
1251	GGGCAGCTGT	GAATACCAAG	TCAATGCTCC	TCCGGTAAGG	GTCCTCGCCGA
1301	ACATTTTCAA	CAAGATGGAG	GAGACTTGTT	CTTTGGAGAG	ATCATTGCCC
1351	TTTACCGCAG	TGACATAATG	ATTACATGAT	CTTCGGGGTC	GGTCGTACCA
1401	TCATAAATTT	TCAGATAAGG	TGGCATCTTG	AACGTCTTGG	GTATGGCATA
1451	TGGGGCGGCT	TCATCACTGT	AGGGTTGCTC	GACTAACC GA	CCAGCGTCTC
1501	TTTTTGGAAA	TATTTTTGGG	GCACCCGGTA	TTTTATCGAC	TCTTTCTTGG
1551	TGTTCTCTCA	TTTGATCCCC	AAGCATTTTA	TTTTCGTTTT	CCATTTCTTC
1601	CATTTTCTTC	GAATGGCCG	TGAGGGTGTC	ATTACCTGCA	TTATTAATAT
1651	TGTGAGTGAT	ACCTGTTACT	GAAGGGGGAG	GGTCGTGCTG	TTTGGTCAAT
1701	GCTGGTGCAA	TGCAAGTCCT	TGCATTTTCT	CTAAATACCT	CCTGAGTGGG
1751	TTTGTGAGG	ATGCCGGTCA	GCATATTTGT	CAGCCAAGCT	TCGAGTAGCT
1801	TCTTGCACCG	TGGTGGCGCC	CTTCCGTTG	TGGACGTGGA	AGCTCCTTTA
1851	CCGCGGGATG	TTGCGATACT	GCTGTGAGGG	AGGGGTGATC	CACCTCGTCG
1901	GGGAGAGGTG	TTAGGCGTTA	TGCCCTCGCC	TTCTATTTTCG	GAGACCTCAT
1951	TGATGGTGTG	TAAGAGGTTG	GTAGTGAGAT	TGGCCACTGC	CTTCATCCTT
2001	TCTTCTCCCT	TACCTGCCAT	GTCAGATCTG	GGTGTACAAG	GAAGTAGGAG
2051	CTTCTCTTCT	TCTTTTTTGT	GAATGTGCCC	AGTTATAGAT	CTAAAAGAAA
2101	CTAAAGTTTT	ACTAGACTA	TCCTCACAGA	CGGCGCCAAA	TTGTTTGACC
2151	AAAAAATATA	GACTTTTGAT	TAAATTAATT	AATATTGTAT	GACAAAGGAT
2201	TAAACCTAGT	TAATGATAAT	AACCTCAGAT	CTATAATCAA	TTAACAGCAA
2251	TCACGGTCAT	AGCAGCGTTG	AGAGAAGATT	AAATGTGATG	TYCATTCAAT
2301	ATTTCAAGAT	CATTAATGAT	AGGGGAATAT	CAAGCAATAA	ATAACGATAA
2351	ATGGCATTA	AGTAAATAAG	GAGAATGATT	CACCCAATAT	TGAATGAGGT
2401	GGATGATTCT	TCTTTTTGAC	AATGATGAAT	GATGGGCAAA	TACTAGAATG
2451	TTGGGACCCT	TCTCGGATCT	AATGAAAAAA	GTATGGAATA	GTAGATAATC
2501	GAATCTCTTT	AGAAAGGTAG	TGATTGTCTT	TTATCTAGAG	AGAAAGTCTG
2551	CTTTTCAAAG	AATATTTTAA	TCAGAGAATA	TTACATCCCC	CTCTCTCCCT
2601	ATCTCTTTTT	CTATTTATAT	GGGACATTC	TCAATCAATC	CTAAAGTAGT
2651	ATACACCAAG	AATATTCAAT	AAAATATTTT	TTTGAATATT	CTAATTATAA
2701	AACTAGCTGT	TAGCACTCGA	CCTCGGTCGY	TATTGACTAC	TCGGTTACGA
2751	GCCCTGTCA	TTACTAATCG	ACCTCGATTA	CATCACTTTC	TACGATACTG
2801	CTTCATGTCA	AATCTTAATG	AAAGCAGATT	TTGACCCATA	CAATAATATG
2851	ACAAAATTGC	TTCCAAAGAA	AACATGGCTC	TTATAGTGAA	ATATCGTTAG
2901	ACTGTTATAG	AAAGATCTGA	ATTTATTTAT	AAGAATAGTG	TTTTTTTCTT
2951	TTCTTTTCAT	ATCTAAGGAG	TAAAGCAACC	ATGAATAGAA	AAGGCTTAGT
3001	AACTATATAT	CAAAGGAATG	GTGTTTTTTC	TTTAAATATG	GATAAAATTT

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Fig. 5B

3051	<u>TGTGAATATA</u>	GAAGATTAGA	TCAATTAACA	AAGGTTATGG	<u>TGGAGTGGTA</u>
3101	AGCAGAGGCG	GACCTATGTG	TTATAGTAAG	GGGTCACCCA	CTACTAGAAA
3151	TCCGGTAAAG	ATCGATCAAA	AAACCGACCA	ACATTGGTCG	GTAATGGCCA
3201	AAAAC TGACC	AAAACGCGAT	CATTTACGTG	TGAACGGTAT	TTTTATGGTC
3251	GGAAAGGAAT	ACCGACCAAA	GTTGGTCGGA	AATTACCGAC	CAACTTTGGT
3301	CGGTCAATTA	AAATTCAAAA	AAATATTGTA	AAAAAAAACC	GACCAAAGTT
3351	GATCGGTATT	TTAATTATGT	AATAAAAAGA	TTCACTATCT	GGGAATCGAA
3401	CCGGGGTCTG	TACTATGGCA	AGATACTATT	CTACCACTAG	ACCATTGGTT
3451	CATTTTGTTT	TAGACTGTC	TTTTATTGTA	TTTATACTCT	TTAATTATAT
3501	TTTTGCACGA	AAATAACCGA	CCAAAGTTGG	TCGATTTTAT	TAAAAAGTAA
3551	AATTACTTAC	CAAGTTGGT	CGATTTTTTT	AAATGATCCG	CCGAATTAAC
3601	CGACCAATTT	TGGTAGGTTT	TTTTAATATT	AATTTTATT	TATTTTAATT
3651	GAAAACTAA	CCAAAGTTAG	TCGGTTTCTT	GAAACATAAA	TTTCGCGGGA
3701	CTCAAAAATA	GTTTCCCGCA	TTTTTGCGCC	AAAGAAAACC	GACCAAAGTT
3751	GGTCGGTTTC	GTA AAAAAA	AAAAAATTTA	AAAAATATAT	TTTAAAAAAC
3801	CGACCAACTT	TAGTCGGTTT	TTGGTTCGAT	TTTTTGACCG	ACCAAAGTTG
3851	GTCGGTCGAC	CTTGGTCGGT	TTTGCCGAA	<u>TTTCTAGTAG</u>	<u>TGACCGAACC</u>
3901	CTGTAAGCTT	CGGGAGAAAT	TTTGATATG	<u>TATATGTGTA</u>	<u>TATCCTTAAA</u>
3951	<u>ATGATTAATT</u>	TAGAACGT	GGCACCCTGA	ATACTAGAAG	CCTTTAGGGG
4001	CACTAGATGA	GCA GAATAAC	GTGTTCTCGT	CGCGTAAAAA	TACTTGGATC
4051	CGCCTATGAT	GCTAAGTACT	TCTTCGTCCT	TAATCAGAGG	TTTCGACTTC
4101	GAGCTCCAGA	TATAAACTAT	AGACTCGTCT	TTATAGCACC	TTTTAATAAG
4151	ACTATGACTT	CATCTGATTT	CTCTATAAAT	ACTCCTCAAG	CTTTCGGTTC
4201	TTCTCCATTG	TTCAGTTTCT	TTCTCCACAT	CACAGAAGTG	<u>AAAACAAAAC</u>
4251	<u>AAGAAGAAGA</u>	<u>AGAAGAAGAA</u>	<u>AAATAAGAG</u>	TTTCTGTCAA	ATTAAGTCCA
4301	ATAGGGAAAA	TG			

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Expression of NIN88-promotor  
GUS fusion in transgenic tobaccoplants

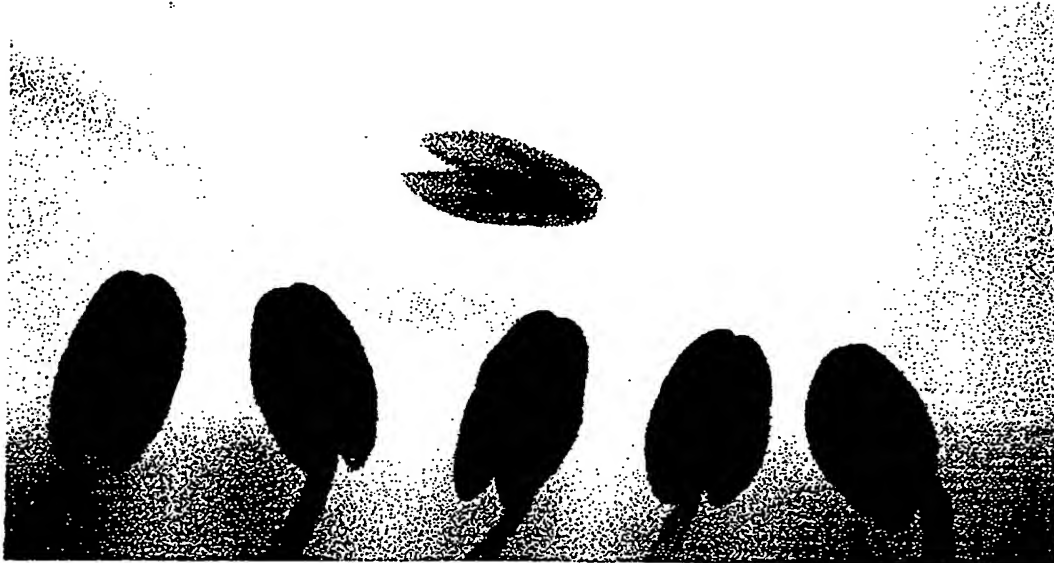


Fig. 6A

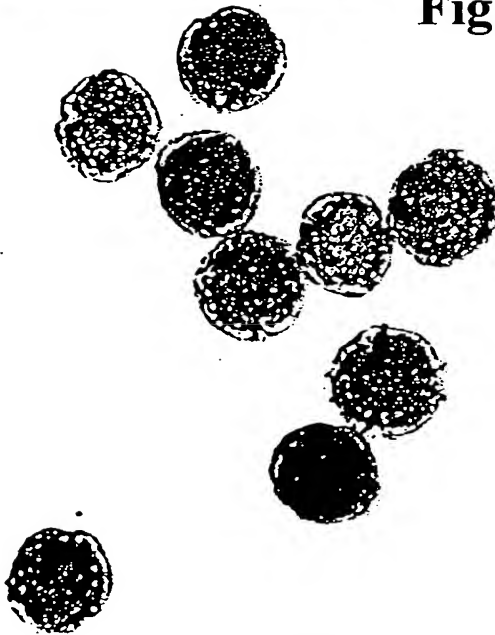


Fig. 6B

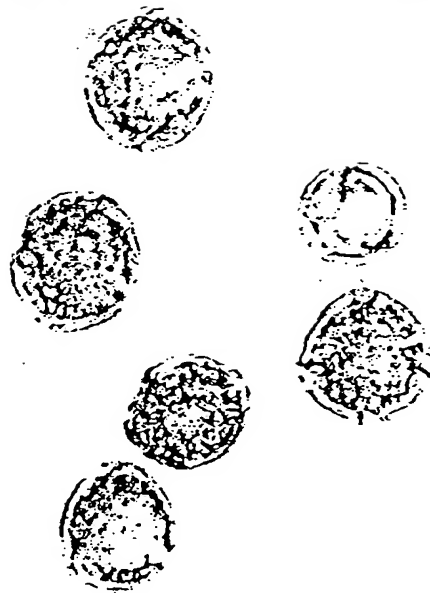


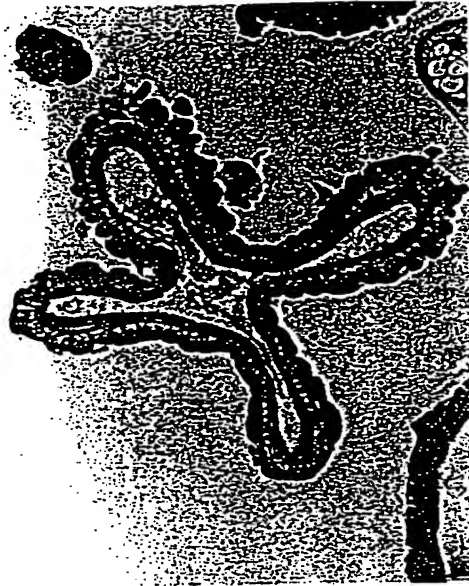
Fig. 6C



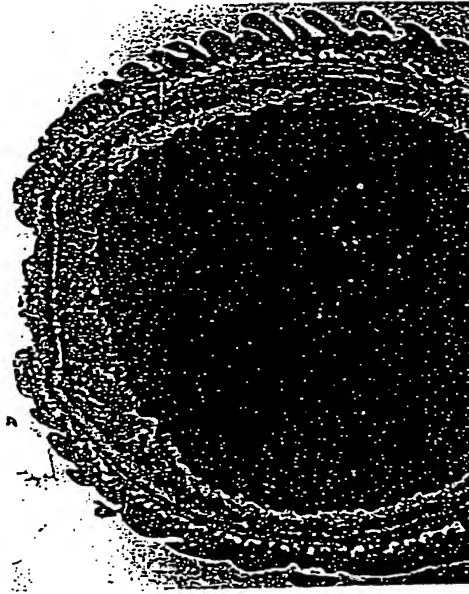
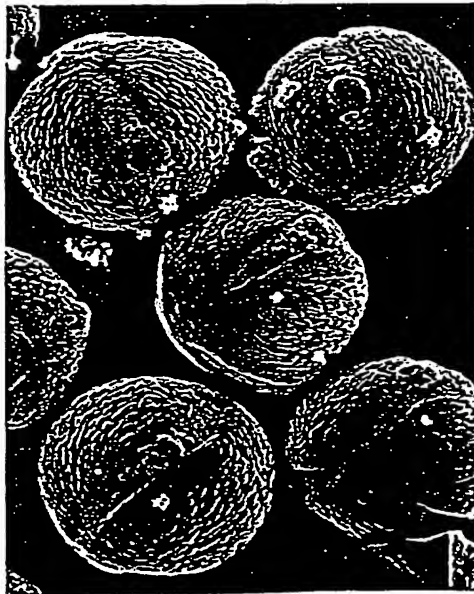
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Fig. 7

NT23-81



wt



REM

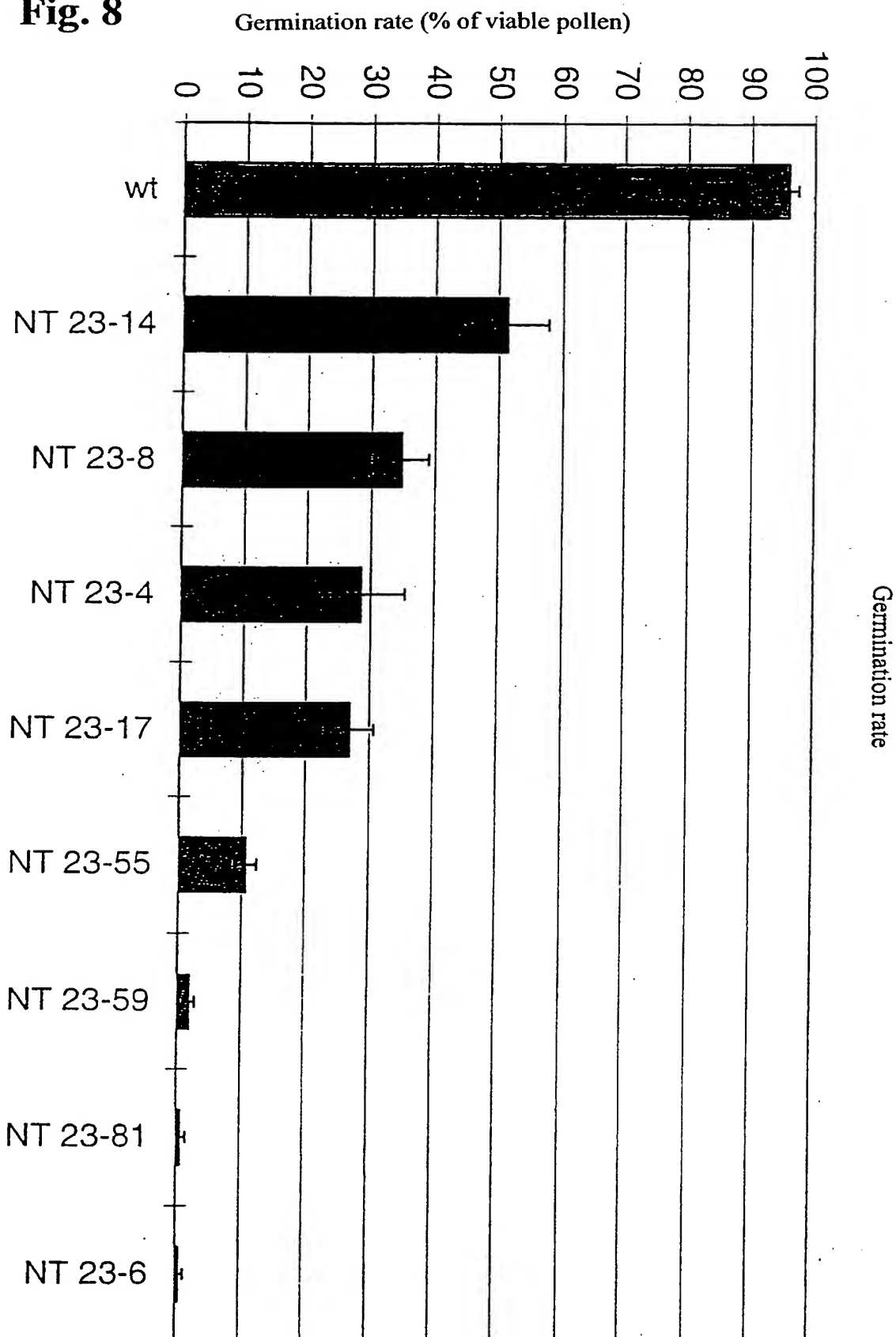
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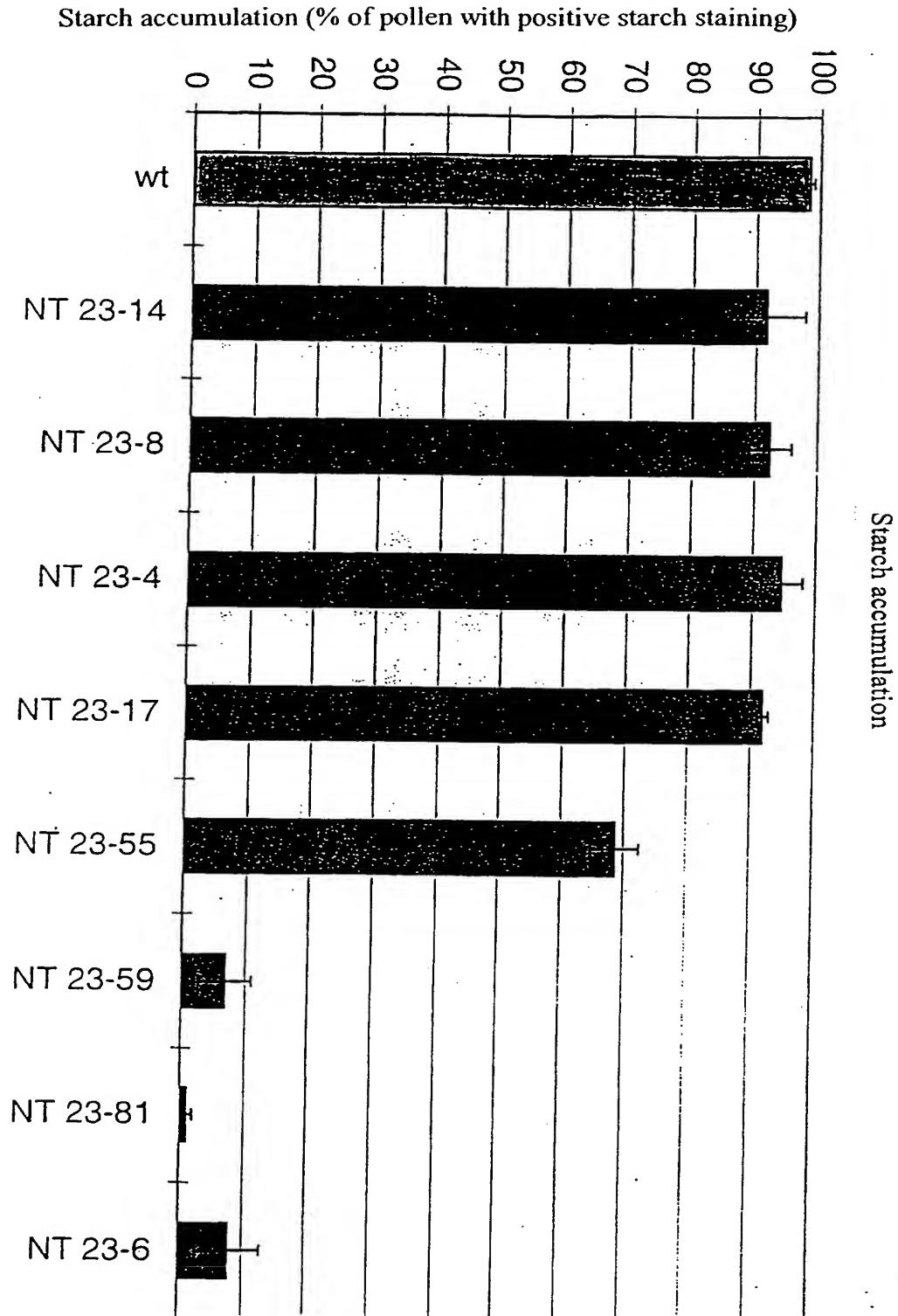
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**Fig. 8**



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**Fig. 9**



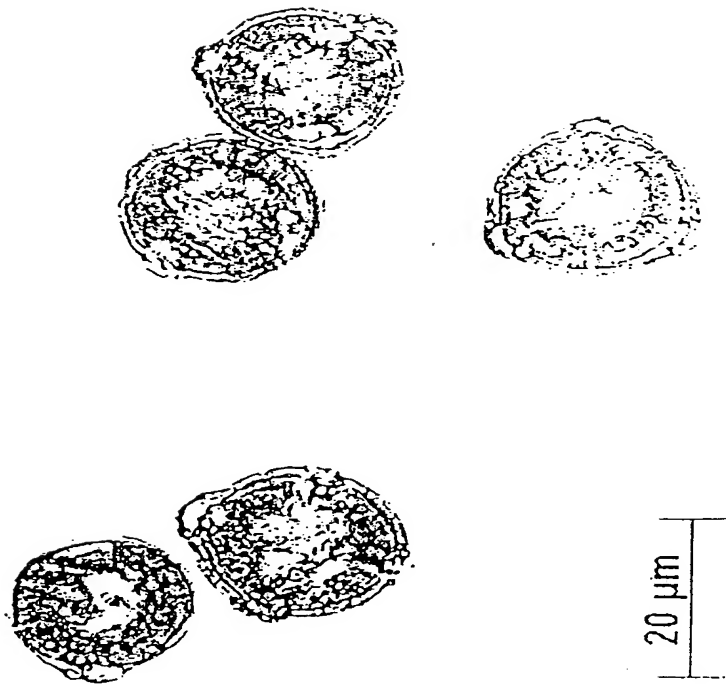
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Fig. 10

NT23-6

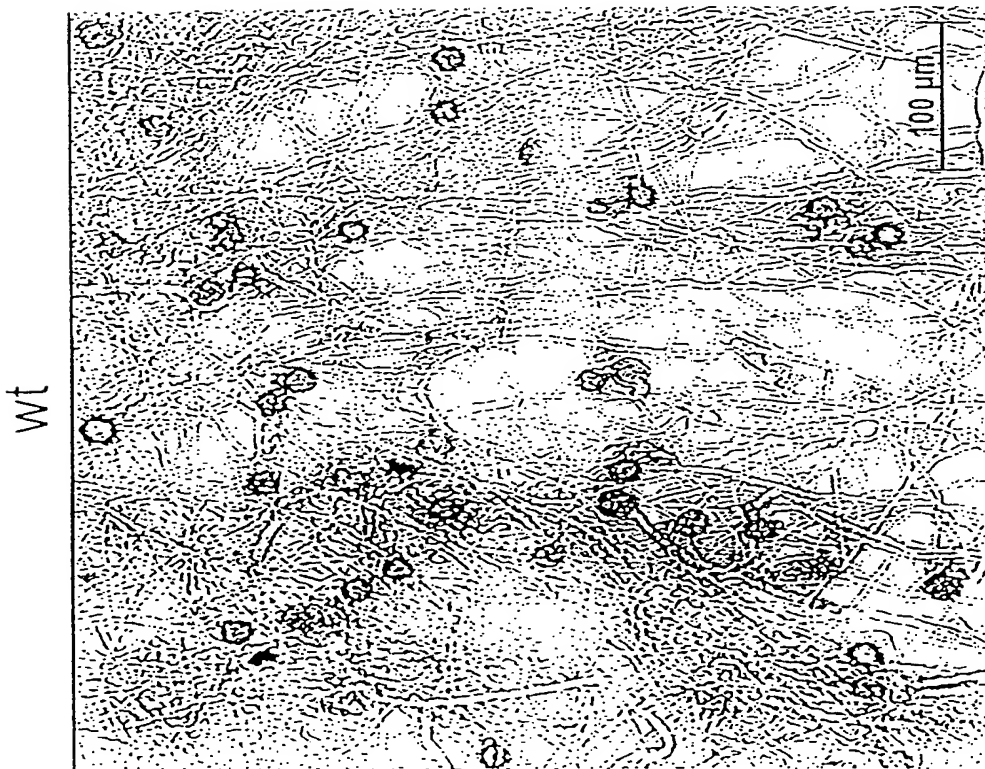
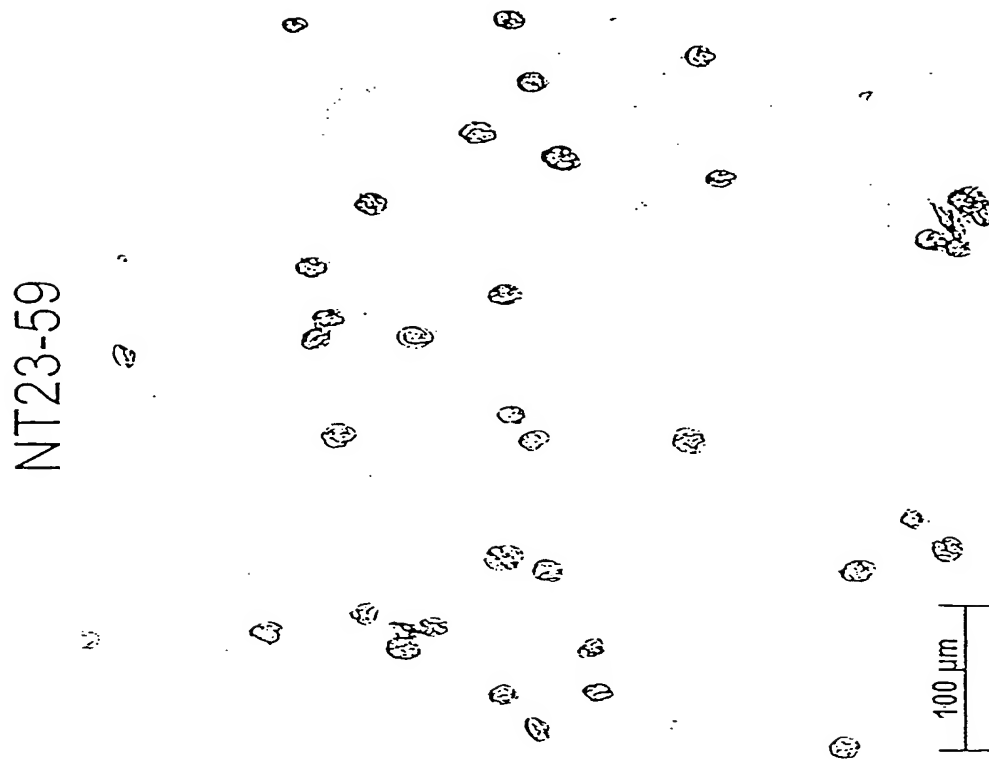


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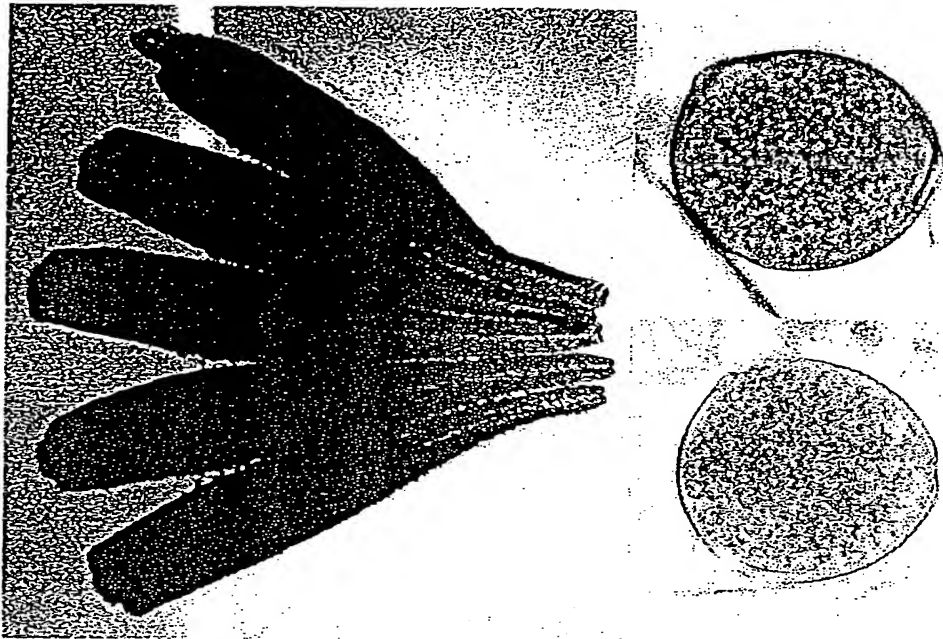
Fig. 11



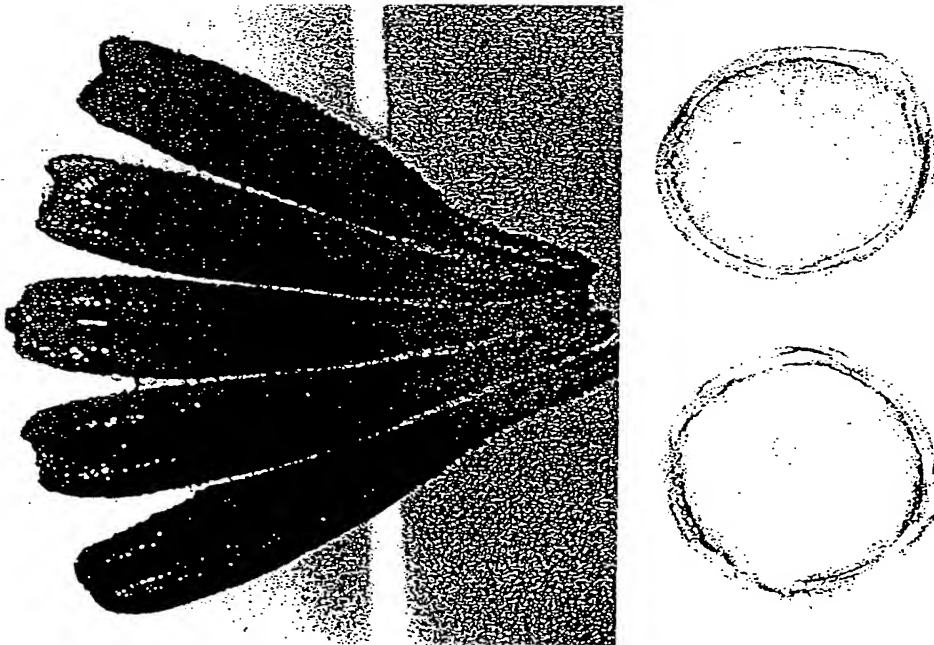
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Fig. 12

LP1-8

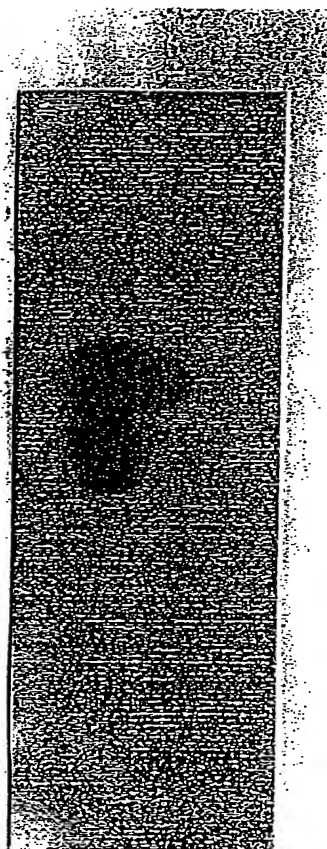


WT



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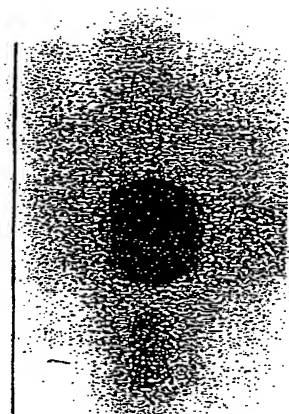
stems  
seedling roots  
small flower buds  
big flower buds  
flowers  
green fruit  
red fruit  
A. tumefaciens tumors



2,4 kb -

Fig. 13A

gynaeceum  
anthers  
petals

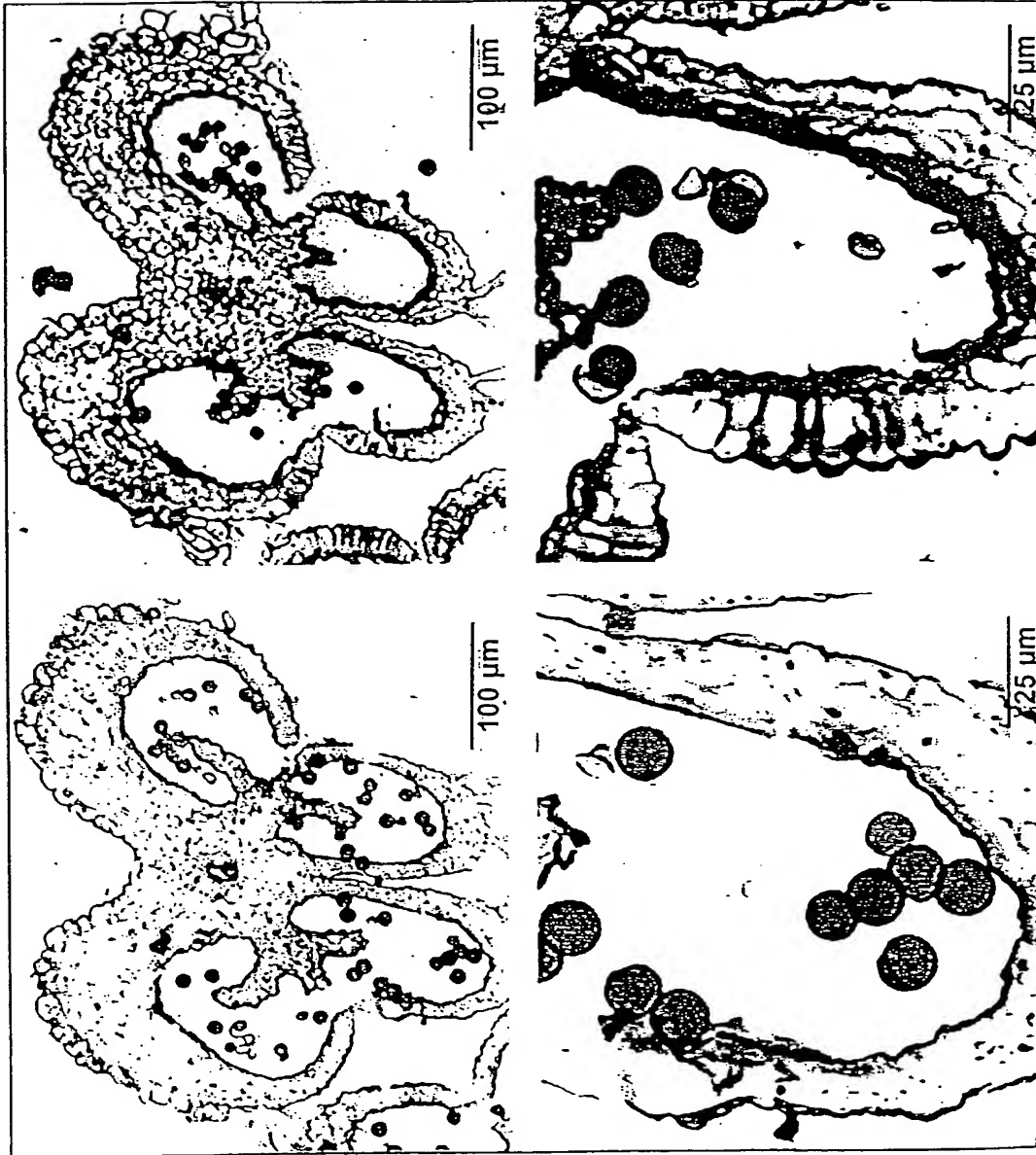


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Fig. 13B

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antisense



sense

Fig. 14A

Fig. 14B



Fig. 15A

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Genomic sequence of NIN88

```
1  ATGGAGCTGT TTAGAAAAAG CTCTTTTCAT TGTGCTTTGC CAGTTTTCAT
51  ATTATTGGTT TGCTTGTTTA TAATTTTATC TAACTATGTT GTGTTTGCTT
101 TCAATTATGA CGTTTTTACG TGCTTCCAAT CCTCAAAAGA TGCTAATATC
151 ACTTCTAACT ACAGAACTGG TTACCATTTT CAACCCCCCA AGAACTGTAT
201 GAATGGTACG TTTCTCTCCC CTTCCACCCA CCCCACCCCC TCTTCTGTTG
251 TTGCTTTTGA TATGTGTATA TATATATATA TATCCATTTT TTGCTCGGTA
301 TCGGCATTAG GATCCACTAA ATTCGGCATT GAGGGGTAAT TAGGCGTCTA
351 ACAAAGTCAA TTCCATAACT AGGGCTCGAA CCCGAGACTT CCGATTAAAA
401 ATGAAGGAGT ACTTAACACT TATTCTGTAA CATTAACAA TAGACATCCT
451 ACTCCTCTAA ACTCATTTGT ATTTTAAAA TATCTATTTT ACCCTCGATC
501 TTATTAGCCT TCATCTACTT TTTTTTTTTT TACTTTTTTA ATATCACAAT
551 ATTTTCTTAT TCTATGTTAT GAATTTACCT ATAGTGAACA TAAAATTTAA
601 AAAAGGTGAA AAACAATAAT CAATCATATA CTTATTGAAG TTAGAATAAT
651 GAAACAAATG GGCGCAATTA AAATATTAGA ATAACAGATC TTATTAATAT
701 CAATCAAATA AAATTTAGTT CAGTAATATA AAAAAATAAT TAAACATAGA
751 GGTAGATTTT CTAAGAAATT CCTAAAAGAT TATATATTTA TAACTTAGAA
801 AATATTTTGT TAATGAAAAT AAATATTCAA AGATATATAC AGAACAACAA
851 CAACAACCCG ACCTTACCCC TACCCTGGGG TAGAGAGACT GTTCCGATA
901 GACCCCTCGG CCCCCTCCCTC CAAGAACTCC CCACCTTGCC CTTGGGATGA
951 CTCGAACTCA CAACCTCTTA GTTGGAAGTG GATGGTGCTT ACCACTAGAG
1001 CAACCCGCTC TTGTCCGAAG ATATATACAG AAACATGTAA TAAAGAATAA
1051 AAGAGAAAGT AAAACTTAAA TATATAGATA ATATTAATGT AACGATAAAA
1101 AAGAGTAACG ATAATTGTTT TTGCAAATTC ATAAAGGTAT TATTCTAGTT
1151 AAATTTTATT GAGTTTAAAT TATATAATTT ATCATAAGAT ATTAAAATTG
1201 GTAAAATACT TAGGCTAATG ATAAAATACA TCTTATATAA TATTAAAAAA
1251 AATAGAGGAG AAATTGAAAA TGTCAAGGGT AAAATAGAAA ATGCATATGA
1301 TAGGAGGAGC GAAATATATA TTATTTAGTG TTGGAAGAGT GATTTGATTT
1351 TTAAGATAAA ATTAGGGGAT GAAAATGATT TTTACACTTT AATAGATAGA
1401 TCCTACTGAA ACACGTGTGA GTTCCAAAAG CAAAAACGA AAAAGGAACC
1451 AGCTCCCTAA TAATGAGTAC TTATTATACA AGTAAATACA ATTAGAGGAC
1501 ACTAATTGCA ACCCCCTACT TGGGAAGTGT CGGCCTATTG CTTTAATTAC
1551 TTATACTCTC ACTCCGTTCA CTTTTACTTA TCCAATATTC TAAGTGACAT
1601 TTGGACATAA GAATTGTAAA ATTCCAAAAT AGGAAAAAAA AATACAAGTG
1651 AAAATGTTAT TTGAAATTTA GAGTTACGTT TGGACATGAA TATAATTTTG
1701 GGTGTGTTTT AAAGTTTTGT GAGTGATTTG AGTGAAAATT TTGAAAAACA
1751 GTTTTTTGAA GTTTTTCAAA TTTTCGAAAA TTTTCAAAAT GCATCTTCAA
1801 ATGAAAATTG AAAATTTTAT GAACAAACGC TGATTTTCGA AAAAAAGTGA
1851 TTTTTTTGTG GAAAAAGAA AAAAATTTCT TATGTCCAAA CGGGCTCTAA
1901 AAATAGATTT TCACTTTTAC TTGTCACTTT TCGCATATCA AGAGAAGACA
1951 ATTTCTTTTT TTCTGTTATA CTCATAGTAT TAATTACTCA TTTCAAATCA
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Fig. 15B

2001	TTTTTTTCAAA	TCCACTAAAA	ATATGTATCA	ATTAATATGG	GTATTATGGT
2051	AAATTATGCA	CTTCATTTAT	TATTTCTTAA	GGAGTGTTCA	AAGTCCGTAG
2101	TAGACAAGTA	AAAGTGAATG	GAGAGAGTAA	TAAATTACAC	CTACTTTCTT
2151	GGAAATACCA	GTTGAGACAT	ACGTAGAACT	TTTGCTAATT	TTTTCTTATT
2201	TTTTCTTAAT	TATATTATAT	TTGTGTGTGA	TATGGGCAGA	AGGGGTGGT
2251	AAGAAGGATC	TTGTCCCCAT	CAGCAACTTA	CAATATTTTA	GGGAAGACAA
2301	ATAATAATTT	TCTGCATTTT	CTAAATTTTT	GTAATTTTCA	TTTTCATTTG
2351	TTTATTATTT	GATTATTCAT	CAATATTAAA	TTATGCAGAT	TTAGTACTCA
2401	CATTCAATTG	TTTATTTTACA	ATTTTTTTTT	ATTTTTTTTCT	TTATGGTCTT
2451	TCTCGATGCC	TTCAAACATA	CAAATAGACC	CCAATGGTGA	GTCAGAAATT
2501	TTATCTTCTT	TTTATATATA	TAATTTAATC	ACCAATTATT	CATTTATGAT
2551	ACTGATTTTT	CATGTAATTA	CCAACAGCAC	CAATGTATTA	CAATGGAGTC
2601	TATCATCTAT	TCTACCAGTA	CAATCCAAAA	GGATCAACAA	TGAACAACAT
2651	TGTTTGGGCT	CATTCAGTCT	CAAAGACTT	AATCAATTGG	ATTAATTTAG
2701	AGCCTGCAAT	TTATCCATCC	AAACCATTG	ACAAATATGG	AACATGGTCT
2751	GGTTCAGCAA	CTATTCTCCC	TGGTAACAAG	CCCATTATTT	TGTACACTGG
2801	AGTGGTAGAT	GCCAACATGA	CCCAAGTCCA	AAATTACGCC	GTCCCGGCCA
2851	ACTTATCCGA	TCCATATCTC	CGTGAATGGA	ACAAGCCCGA	TAACAACCCG
2901	TTGATCGTCC	CGGATATCAG	CATCACCAG	ACCCAATTTT	GTGACCCGAC
2951	AACAGCTTGG	ATGGGCAAAG	ATGGTCATTG	GAGAATTGTG	GTAGGAAGTT
3001	CAAGAAACCG	TGGTGGGTTG	GCAATATTGT	ATAGAAGTAG	GAATTTTCATG
3051	AAATGGATCA	AGGCTGAGCA	TCCACTTCAT	TCATCTGCCA	AAACAGGAAA
3101	TTGGGAATGC	CCAGATTTTT	TTCTGTGTTT	CTTGCAAGGT	TCTAATGGTT
3151	TAGATGCATC	GTACAACGGA	AAATATGTTA	AGTACGTTCT	CAAGAATAGC
3201	CTTCCTGTTG	CCGCGTTTGA	GTACTACACA	ATTGGTACAT	ATGATGCCAA
3251	ACAAGATAGG	TATATTCCAG	ATAACACTTC	AGTCGATGGT	TGGAAAGGAT
3301	TGAGACTTGA	CTATGGCATT	TTCTACGCGT	CTAAGTCGTT	CTACGACCCT
3351	AGTAAGGACC	GAAGAATCGT	GTGGGGTTGG	TCTTATGAAT	TAGATGGTCT
3401	CCCCAATAAT	GAAAACAACA	AAGGATGGGC	CTGGAATTCA	GGCTATCCCC
3451	CGTAAAGTAT	GGCTTGATTT	CAGTGGTAAA	CAATTAGTTC	AATGGCCTAT
3501	TGAAGAATTA	AAAACCTCTA	GAAAGCAAAA	TGTCCGATTG	AGCAACAAAA
3551	GGCTGGATAA	TGGAGAAAAG	ATTGAAGTTA	AAGGAATCAC	AGCGTCGCAG
3601	GTTTAGACTT	TTTTCTAGTT	TTTAATTTGC	AAGCATTTTA	AATAAAATTT
3651	TCTTCACAAG	TTAAGGCTAA	GTTGGGACAT	CTATTGAAAT	TGCCAGGCTG
3701	ATGTTGAAGT	GACATTCTCC	TTCTCTAGCT	TAGACAAGGC	AGAGCCATTT
3751	GATCCTAGTT	GGGCTGATCT	TTATGCACAA	GATGTTTGTG	CAATTAAGGG
3801	TTCAACTGTT	CCAGGTGGGC	TTGGGCCATT	TGGCCTTGCA	ACATTGGCTT
3851	CTCAAAACTT	AGAAGAATAC	ACACCTGTTT	TTTTTCAGAGT	GTTCAAAGCT
3901	CAGAATTT				

**Fig. 16A**

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**Sequence of NIN88 promotor fused with NIN88 antisense**

```

1   TCGAGCCATT CATG TTCAGC CCATTCTGGA AAGTTGCTAC AACCATTCCCT
51  TCTGATACAT TCGGTAAGGT CATCCTTACT CTGTTGAATC GAGCGAGGAA
101 GTCCCTCAAT CCCTCTCCGA GTGATTGTTT GATGGCAAAT ATATCGTTCA
151 CTCTTGCCCTC CGCGTTTTTA GCCCAACAT GGGCCATTAT GAACTTGTCG
201 GCCATCTCTT CGAATATTTT AATGGAGCGC GCGGGCAGCT GTGAATACCA
251 AGTCAATGCT CCTCCGGTAA GGGTCTCGCC GAACATTTTC AACAAAGATGG
301 AGGAGACTTG TTCTTTGGAG AGATCATTGC CCTTTACCGC AGTGACATAA
351 TGATTACATG ATCTTCGGGG TCGGTCGTAC CATCATAAAT TTTCAGATAA
401 GGTGGCATCT TGAACGTCTT GGGTATGGCA TATGGGGCGG CTTTCATCACT
451 GTAGGGTTGC TCGACTAACC GACCAGCGTC TCTTTTTGGA AATATTTTTG
501 GGGCACCCGG TATTTTATCG ACTCTTTCTT GGTGTTCTCT CATTTGATCC
551 CGAAGCATTT TATTTTCGTT TTCCATTTCT TCCATTTTCT TCAGAATGGC
601 CGTGAGGGTG TCATTACCTG CATTATTAAT ATGTGTAGTG ATACCTGTTA
651 CTGAAGGGGG AGGGTCGTGC TGT TTGGTCA TTGCTGGTGC AATGCAAGTC
701 CTTGCATTTT CTCTAAATAC CTCCTGAGTG GTTTTGTTGA GGATGCCGGT
751 CAGCATATTT GTCAGCCAAG CTTGAGTAG CTTCTTCACC GCTGGTGGCG
801 CCTCTTCCGT TGTGGACGTG GAAGCTCCTT TACCGCGGGA TGT TGCGATA
851 CTGCTGTGAG GGAGGGGTGA TCCACTTCGT CGGGGAGAGG TGTTAGGCGT
901 TATGCCTTCG CCTTCTATTT CGGAGACCTC ATTGATGGTG TTTAAGAGGT
951 TGGTAGTGAG ATTGGCCACT GCCTTCATCC TTTCTTCTCC CTTACCTGCC
1001 ATGTCAGATC TGGGTGTACA AGGAAGTAGG AGCTTCTCTT CTTCTTTTTT
1051 GTGAATTGTG CCAGTTATAG ATCTAAAAGA AACTAAAGTT TTAAGTAGAC
1101 TATCCTCACA GACGGCGCCA AATTGTTTGA CCAAAAAATA TAGACTTTTG
1151 ATTAATTTAA TTAATATTGT ATGACAAAGG ATTAAACCTA GTTAATGATA
1201 ATAACCTCAG ATCTATAATC AATTAACAGC AATCACGGTC ATAGCAGCGT
1251 TGAGAGAAGA TTAAATGTGA TGTnCATTCa ATATTTCAAG ATCATTAATG
1301 ATAGGGGAAT ATCAAGCAAT AAATAACGAT AAATGGCATT AAAGTAAATA
1351 AGGAGAATGA TTCACCCAAT ATTGAATGAG GTGGATGATT CTTCTTTTTG
1401 ACAATGATGA ATGATGGnCA AATACTAGAA TGT TGGGACC CTTCTCGGAT
1451 CTAATGAAAA AAGTATGGAA TAGTAGATAA TCGAATCTCT TTAGAAAGGT
1501 AGTGATTGTC TTTTATCTAG AGAGAAAGTC TGCTTTTCAA AGAATATTTT
1551 TATCAGAGAA TATTACATCC CCCTCTCTCC CTATnTCTTT TTCTATTTAT
1601 ATGGGACATT CCTCAATCAA TCCTAAAAGT ACATACACCA AGAATATTCA
1651 ATAAAATATT TTTTGAATA TTCTATTATA AAAACTAGCT GTTAGCACTC
1701 GACCTCGGTC GnTATTGACT ACTCGGT TAC GAGCCCTGTC ATTTACTAAT
1751 CGACCTCGAT TACATCACTT TCTACGATAC TGCTTCATGT CAAATCTTAA
1801 TGAAAGCAGA TTTTGACCCA TACAATAATA TGACAAAATT GCTTCCAAAG
1851 AAAACATGGC TCTTATAGTG AAATATCGTT AGACTGTTAT AGAAAGATCT
1901 GAATTTATTT ATAAGAATAG TGTTTTTTTTC TTTTCTTTTC ATATCTAAGG
1951 AGTAAAGCAA CCATGAATAG AAAAGGCTTA GTAACATAT ATCAAAGGAA
2001 TGGTGTTTTT TCTTTAAATA TGGATAAAAA TTTGTGAATA TAGAAGATTA
2051 GATCAATTAA CAAAGGTTAT GGTGGAGTGG TAAGCAGAGG CGGACCTATG

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Fig. 16B

2101	TGTTATAGTA	AGGGGTCACC	CACTACTAGA	AATCCGGTAA	AGATCGATCA
2151	AAAAACCGAC	CAACATTGGT	CGGTAATGGC	CAAAAACCTGA	CCAAAACGCG
2201	ATCATTTTACG	TGTGAACGGT	ATTTTTTATGG	TCGGAAAGGA	ATACCGACCA
2251	AAGTTGGTCG	GAAATTACCG	ACCAACTTTG	GTCGGTCAAT	TAAATTCAAA
2301	AAAAATATTG	TAAAAAATAA	CCGACCAAAG	TTGATCGGTA	TTTTAATTAT
2351	GTAATAAAAA	GATTCACTAT	CTGGGAATCG	AACCGGGGTC	TGTACTATGG
2401	CAAGATACTA	TTCTACCACT	AGACCATTGG	TTCATTTTGT	TTTAAGACTG
2451	TCTTTTATTT	GATTTTATACT	CTTTAATTAT	ATTTTGTGCAC	GAAAATAACC
2501	GACCAAAGTT	GGTCGATTTT	ATTAAAAAGT	AAAATTACTT	ACCAAAGTTG
2551	GTCGATTTT	TTAAATGATC	CGCCGAATTA	ACCGACCAAT	TTTGGTAGGT
2601	TTTTTTAATA	TTAATTTT	TTTATTTTAA	TTGAAAAACT	AACCAAAGTT
2651	AGTCGGTTTC	TTGAAACATA	AATTTCGCGG	GACTCAAAAA	TAGTTTCCCG
2701	CATTTTTCG	CCAAAGAAAA	CCGACCAAAG	TTGGTCGGTT	TCGTAAAAAA
2751	AAAAAAATT	TAAAAAATAT	ATTTTAAAAA	ACCGACCAAC	TTTAGTCGGT
2801	TTTTTGGTCG	ATTTTTTGAC	CGACCAAAGT	TGGTCGGTCG	ACCTTGGTCG
2851	GTTTTTGCCG	AATTTCTAGT	AGTGACCGAA	CCCTGTAAGC	TTCGGGAGAA
2901	ATTTTGTATA	TGTATATGTG	TATATCCTTA	AAATGATTAA	TTTAAAGAAC
2951	GnnGCACCCT	GAATACTAGA	AGCCTTTAGG	GGCACTAGAT	GAGCAGAATA
3001	ACGTGTTCTC	GTCGCGTAAA	AATACTTGGA	TCCGCCTATG	ATGGTAAGTA
3051	CTTCTTCGTC	CTTAATCAGA	GGTTTCGACT	TCGAGCTCCA	GATATAAACT
3101	ATAGACTCGT	CTTTATAGCA	CCTTTTAATA	AGACTATGAC	TTCATCTGAT
3151	TTCTCTATAA	ATACTCCTCA	AGCTTTCGGT	TCTTCTCCAT	TGTTTCAGTTT
3201	CTTCTCCAC	ATCACAGAAG	TGAAAAACAA	ACAAGAAGAA	GAAGAAGAAG
3251	AAAAATAAAG	AGTTTCTGTC	AAATTAAGTC	CAATAGGGAA	AATGGAGCTG
3301	TTTGGATCCC	CGTTTTCATT	ATTGGGGAGA	CCATCTAATT	CATAAGACCA
3351	ACCCACACG	ATTCTTCGGT	CCTTACTAGG	GTCGTAGAAC	GACTTAGACG
3401	CGTAGAAAAT	GCCATAGTCA	AGTCTCAATC	CTTCCAACC	ATCGACTGAA
3451	GTGTTATCTG	GAATATACCT	ATCTTGTTTG	GCATCATATG	TACCAATTGT
3501	GTAGTACTCA	AACGCGGCAA	CAGGAAGGCT	ATTCTTGAGA	ACGTACTTAA
3551	CATATTTTCC	GTTGTACGAT	GCATCTAAAC	CATTAGAACC	TTGCAAGGAA
3601	ACAGGAAAAA	AATCTGGGCA	TTCCCAATTT	CCTGTTTTTG	CAGATGAATG
3651	AAGTGGATGC	TCAGCCTTGA	TCCATTTTCAT	GAAATTCCTA	CTTCTATACA
3701	ATATTGCCAA	CCCACCACGG	TTTCTTGAAC	TTCTTACCAC	AATTCTCCAA
3751	TGACCATCTT	TGCCCATCCA	AGCTGTTGTC	GGGTCACGAA	ATTGGGTCTT
3801	GGTGATGCTG	ATATCCGGGA	CGATCAACGG	GTTGTTATCG	GGCTTGTTCC
3851	ATTCACGGAG	ATATGGATCG	GATAAGTTGG	CCGGGACGGC	GTAATTTTGG
3901	ACTTGGGTCA	TGTTGGCATC	TACCACTCCA	GTGTACAAAA	TAATGGGCTT
3951	GTTACCAGGG	AGAATAGTTG	CTGAACCAGA	CCATGTTCCA	TATTTGTCAA
4001	ATGGTTTGGA	TGGATAAATT	GCAGGCTCTA	AATTAATCCA	ATTGATTAAG
4051	TCTTTTGAGA	CTGAATGAGC	CCAAACAATG	TTGTTTATTG	TTGATCCTTT
4101	TGGATTGTAC	TGGTAGAATA	GATGATAGAC	TCGAG	

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Fig. 17A

1 CATAATCAAA TGTGTGGTCT TATGTAGAAC TAATATTTGG TAATATTAGG  
51 CAAGTTGTTA TGTGACTTAT TTTATTCAAA AATATAATAA GAAGTTCAAA  
101 GAGAAGAGTA CAAGTAAGTA AGTAAGCAGA GACGAATCCT GGATTTAAAG  
151 GGTCTGGCTA TATTAATGTT TTTTAAATTT AAGCATTAGC GATTCGCCTT  
201 GCAAGTAATC GATAGGACAA AAGTTTTACC TTACTAATTC TATTGAGGCA  
251 CCAAATCCCT ATGAAAAAGC ATGTAAAATA TGAGAAGACG AAAGAATTAA  
301 ATAGGTTATA ATTATTGTAT AATTTATAAC ACACTTTATG ATAATATTAC  
351 AAATAAGAAT ATCGAATATT TAATTAATGA CGAACTATAA AAGCAAAGAA  
401 GGAAGGATGA GCTTCCAAAA ACAATCGCAA ATGAATAAAG ATGCCCAAAA  
451 TAGAGTAACC TAACGAAGTC GATACTTCCA TTCATAATCA AATCTGTTCA  
501 AAAACACTTG ATGGGTTATT TTTAACTTTA AGAGATGTAT CATATCGTCT  
551 CTTATTATTC CTTTAGGGCT ATTCGCCGTA GGAATAAAAT TTATATGATC  
601 AAATTTACAG TTATATAAAAT AATGTGAAGA AAAAATTAT ACTTTTCAAG  
651 GTAACAAGAA ATCATGTTTT TTTTACGCCT TCGTGGAGAC TACTTCCTCG  
701 TAACAAAAAA TTAACATTTT AAGTGGCGAC TCTAAAAACT CGTGGCCAGT  
751 ATATTAGTCG CCATTAAACA TTATTTTTAA TCATGAGTTC TTTTCTTTTT  
801 TAATCTTTTT TTAAGGTCAA ATTTACCACT TTATCTTATT TATTTAAATT  
851 GAAAAATCCC AAATTTTGCA TTATTTTTTT GAATTCCTTT TTTTTTTACA  
901 CACTCAAAAA GTCAAAACAT TAAAAAAGC AAATAGCAA TTAAATGGCA  
951 AAAGACTTGT TGTAACAAAA AAAAAATAGT AAAACAGACT CATAAAAGGT  
1001 AACAATAACC AACAAATCAC ACAAATTGT AGATAAATAT TATGCAAACA  
1051 AATAAAAATT AATAATCCAA TCCATTTATT TATTTTTTTA AAAAAACCT  
1101 AAATTAATC TCCATCTTTC AATCAAAAAC AAATCTACC CATTTTTTTC  
1151 ACTTATAAATA CTCTTCATAA TTTTCATTTG TTCTTCATTC CCATGTTTCT  
1201 TTTCTCCTTA TCCAAAAAAA AAAAAATTAA AAAAAATTAT TTAGATTAAA  
1251 TATCACTATC TGTCAAAGCC CAATCATTAA AATAAAATAA AAATTATGGA  
1301 TTATTCATCT AATAAAAGTT CTCGTTGGGC TTTGCCAGTT ATCTTAGTTT  
1351 GCTTTTTTGT AATTTTATTA TCCAATAATG TTGTTTTTGC TTCTCATAAA

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**Fig. 17B**

1401 GTTTTTATTC ACTTGCAATC TCAAATGCC GTAAATGTTC ATACTGTTCA  
1451 TCGAACTGGT TATCATTTTC AGCCCGAAAA ACATTGGATC AATGGTATGT  
1501 TTATTCCTTT TTTTCGTCTT TTTTTTATAT ATATATATAT AATAAACGA  
1551 ACATGTTGTG TTTAGTCTAG ATTTAATACT AGTGATTTTT TTGACGCTAA  
1601 CAAATAATCG AGTACTCACC ATTTGTCAAT AGATACATTG ACATGTATTA  
1651 GTATGATTTT CGTCTTTTTT CGTTGTTTCT AATATTATTT AATCTTCACT  
1701 AATTTTTTTA TTTTCTTTG AATGATGTCT CTTGGTCAAA ACATACAATA  
1751 GATCCCAATG GTAAGTTAAC TATATTTTTG TATATTTTTT AAATTTATTT  
1801 TATTCTTATT ATATAATATA GGGAAAAAAG GATAAATATA TCCCCGAAC  
1851 ATTATAAATA GTATGCACCA GTATCCTCTG TTATACTTTA GAGATATTTT  
1901 TGCCGTCAAA AACTAGAAC ACATATATCC TTTATTTATC CCGATATCGA  
1951 ATCGATTGTA CCACGAGTGA AGGGTATAGC TCTAGTTTTG GACGGTAGGG  
2001 CACCTAAAGT AGACGAAGA

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